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STELLAR series

Stellar | Stellar GL | Stellar HD

MANUAL TILT WHEELCHAIR

Owner's Operation and Maintenance Manual

DEALER
This manual must be given to the user of the wheelchair.

USER
Before using this wheelchair, read this entire manual and save for future reference.

For more information regarding PDG products, parts & service, please visit www.pdgmobility.com

CE

Class 1 Medical Device Registration CA 004986

WARNING

Do not operate this equipment without first reading and understanding this manual. If you are unable to understand the warnings and instructions, contact a health care professional such as a doctor or therapist who is familiar with this type of product before attempting to use this equipment. Otherwise, injury or damage may result.

Refer to this manual regularly for maximum safety and performance.

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LIMITED WARRANTY

PLEASE NOTE — THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights, which vary from state to state.

PDG warrants its product, except for the seat cushion (which is not warranted), to be free from defects in materials and workmanship for a period of one (1) year from date of purchase. The side frames and cross-members are warranted for the lifetime of the original purchaser/user. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at PDG's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. PDG's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your PDG product. In the event you do not receive satisfactory warranty service, please write directly to PDG at the address on the back cover page, provide dealer's name, address, and date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent.

Limitations and exclusions: the foregoing warranty shall not apply to serial numbered products if the serial number has been removed or defaced, products subjected to negligence, accident, improper operation, maintenance or storage, products modified without PDG's express written consent including, but not limited to, modification through the use of unauthorized parts or attachments; products damaged by reason of repairs made to any component without the specific consent of PDG, or to a product damaged by circumstances beyond PDG's control, and such evaluation will be solely determined by PDG. The warranty shall not apply to problems arising from normal wear or failure to adhere to these instructions. The foregoing express warranty is exclusive and in lieu of any other warranties whatsoever, whether express or implied, including the implied warranties of merchantability and fitness for a particular purpose, and the sole remedy for violations of any warranty whatsoever, shall be limited to repair or replacement of the defective product pursuant to the terms contained herein. The application of any implied warranty whatsoever shall not extend beyond the duration of the express warranty provided herein. The manufacturer shall not be liable for any consequential or incidental damages whatsoever.

This warranty shall be extended to comply with state/provincial laws and requirements.

Performance Attributes of the Test Wheelchair			
Test Method	Test Title	Relevant Wheelchair Type	Disclosure
		Manual	All results meet at least the minimum performance requirements of AS 3695
AS 3696.1	Determination of static stability	Manual	Stable on a slope of 10° or labelled in accordance with Clause 6.1 Pass (100kg dummy) with locked brakes in the fore direction: >15°/0° with locked brakes in the aft direction: >15°/>15° with unlocked brakes in the aft direction: >15°/0° with locked brakes in the transverse direction: >15°
AS3696.3	Determination of the efficiency of brakes	Manual	Parking brakes hold on a slope of 10° Pass (100kg dummy)
AS3696.8	Static, impact & fatigue strength	Manual	Pass (100kg)
Dimensional Attributes of the Test Wheelchair			
Test Method	Test Title	Relevant Wheelchair Type	Results
AS 3696.5	Determination of all overall dimensions, mass and turning space	Manual	Length ..... 1150 mm Length without footrest ..... 900mm Width ..... 720mm Folded length .....n/a Folded width .....n/a Folded height .....n/a Mass ..... 33.4kg Turn around width.....1235mm
ISO 7176-7	Determination of seating dimensions	Manual	Seat plane angle.....1.5° Effective seat length ..... 475mm Maximum seat width ..... 450m Seat surface height ..... 455mm Backrest angle.....10° Backrest height..... 552mm

SPECIAL NOTES

WARNING/CAUTION — notices as used in this manual apply to hazards or unsafe practices which could result in personal injury or property damage.

NOTE — THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

WHEELCHAIR USER — As a manufacturer of wheelchairs, PDG endeavors to supply wheelchairs to meet many needs of the end user. However, final selection of the type of wheelchair to be used by an individual rests solely with the user and his/her health care professional capable of making such a selection.

WHEELCHAIR TIE-DOWN RESTRAINTS AND SEAT RESTRAINTS — PDG recommends that wheelchair users NOT be transported in vehicles of any kind while in wheelchairs. As of this date, Transport Canada, and the Department of Transportation has not approved any tie-down systems for transportation of a user in a moving vehicle of any type while in a wheelchair.

It is PDG's position that users of wheelchairs should be transferred into appropriate seating in vehicles for transportation and that use be made of the restraints made available by the auto industry. PDG can not and does not recommend any specific wheelchair transportation systems.

REGARDING RESTRAINTS - SEAT BELTS - IT IS THE OBLIGATION OF THE HME DEALER, THERAPISTS AND OTHER HEALTH CARE PROFESSIONALS TO DETERMINE IF A SEATING RESTRAINT IS REQUIRED TO ENSURE THE SAFE OPERATION OF THIS EQUIPMENT BY THE USER. SERIOUS INJURY CAN OCCUR IN THE EVENT OF A FALL FROM A WHEELCHAIR.

SAFETY SUMMARY

Operating Information Warning

To determine and establish particular safety limits, practice bending, reaching and transferring activities in several combinations in the presence of a qualified health professional BEFORE attempting active use of the wheelchair.

- ✖ **DO NOT** attempt to reach objects if you have to move forward in the seat.
- ✖ **DO NOT** attempt to reach objects if you have to pick them up from the floor by reaching down between your knees.
- ✖ **DO NOT** lean over the top of the back upholstery to reach objects from behind as this may cause the wheel chair to tip over.
- ✖ **DO NOT** shift your weight or sitting position toward the direction you are reaching as the wheelchair may tip over.
- ✖ **DO NOT** tilt the wheelchair without assistance.
- ✖ **DO NOT** use an escalator to move a wheelchair between floors. Serious bodily injury may occur.
- ✖ **DO NOT** attempt to stop a moving wheelchair with the wheel locks. WHEEL LOCKS ARE NOT BRAKES.
- ✔ Before attempting to transfer in or out of the wheelchair, every precaution should be taken to reduce the gap distance. Turn both casters toward the object you are transferring onto. When transferring to and from the wheelchair, ALWAYS ENGAGE BOTH WHEEL LOCKS.
- ✖ **DO NOT** operate on roads, streets or highways.

- ✖ **DO NOT** climb, go up or down ramps or traverse slopes greater than 9º.
- ✖ **DO NOT** attempt to move up or down an incline that is wet, icy or contains an oily film.
- ✖ **DO NOT** attempt to ride over curbs or obstacles. Doing so may cause your wheelchair to turn over and cause bodily harm or damage to the wheelchair.
- ✖ **DO NOT** use unauthorized parts, accessories, or adapters other than those authorized by PDG.
- ✖ **DO NOT** attempt to lift wheelchair by any removable (detachable) parts.
- ✖ **DO NOT** stand on the frame of the wheelchair.
- ✔ For products supplied with anti-tippers, anti-tippers must be attached at all times.
- ✖ **DO NOT** use the footplate as a platform when getting in or out of the wheelchair.
- ✔ **ALWAYS** wear your seat restraint.

Tire Pressure

- ✖ If pneumatic tires are supplied, DO NOT use your wheelchair unless it has the proper tire pressure(p.s.i.). DO NOT over inflate the tires. Failure to follow these suggestions may cause the tire to explode and cause bodily harm.
- ✔ Replacement of a pneumatic tire or tube MUST be performed by an authorized PDG Dealer or Qualified Technician.

Weight Training

- ✖ **PDG DOES NOT** recommend the use of its wheelchairs as a weight training apparatus. PDG wheelchairs have NOT been designed or tested as a seat for any kind of weight training. If occupant uses said wheelchair as a weight training apparatus, PDG shall NOT be liable for bodily injury and the warranty will be voided immediately.

Weight Limitation

The PDG Stellar wheelchair has a weight limitation of 250 lb. unless otherwise specified by PDG.

Safety/Handling of Wheelchairs

"Safety and Handling" of the wheelchair requires close attention of the wheelchair user as well as the assistant. This manual points out the most common procedures and techniques involved in the safe operation and maintenance of the wheelchair. It is important to practice and master these safe techniques until you are comfortable in maneuvering around frequently encountered architectural barriers.

Use this information only as a "basic" guide. The techniques that are discussed on the following pages have been used successfully by many.

Individual wheelchair users often develop skills to deal with daily living activities that may differ from those described in this manual. PDG recognizes and encourages each individual to try what works best in overcoming architectural obstacles that they may encounter. Techniques in this manual are a starting point for the new wheelchair user and assistant with "safety" as the most important consideration for all.

CONTACTING YOUR SUPPLIER TO OBTAIN SERVICE

PDG has trained customer service representatives in many locations. To find your nearest Customer Service Center, visit our web site at www.pdgmobility.com and click on CONTACTS. If you are uncertain about which CONTACT is most appropriate for your needs, contact PDG directly using telephone, fax, or e-mail contact information. Supply the serial number from the product you are attempting to service and we will be happy to inform you of the supplier who initially provided your product.

DAMAGE REQUIRING SERVICE BY QUALIFIED SERVICE AGENT

In some circumstances it may be required that your wheelchair be returned to a Qualified Service Agent for repairs. If any of the following conditions are observed, the wheelchair must be serviced by a Qualified Service Agent:

- ✖ Any part of the frame is cracked or broken
- ✖ Any weld is cracked or broken

Always contact your Service Agent prior to sending a wheelchair for repairs. For safe and secure shipping, the wheelchair must be boxed or fastened to a pallet to ensure it does not become damaged during shipping. Service agent will provide specific instructions for packaging and shipping your wheelchair. Alternatively, Qualified Service Agent may arrange for pick-up.

3 NEVER transport this chair in the front seat of a vehicle. It may shift and interfere with the driver.

4 ALWAYS secure this chair so that it cannot roll or shift.

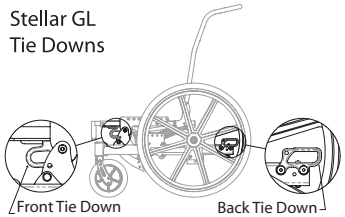
5 Do not use any chair that has been involved in a motor vehicle accident.

If your chair is equipped with the Transit Tie-Down System (TTDS)
Available only on Stellar and Stellar GL

1 If possible and feasible, the rider should transfer to the Original Equipment Manufacturer vehicle seat and use the vehicle restraint.

2 Use only Wheelchair Tie Down and Occupant Restraint Systems (WTORS) which meet the requirements of SAE J2249 Recommended Practice – Wheelchair Tie Down and Occupant Restraint Systems For Use in Motor Vehicles. Do not use WTORS designed to rely on the wheelchair structure to transfer occupant restraint loads to the vehicle.

Stellar GL
Tie Downs

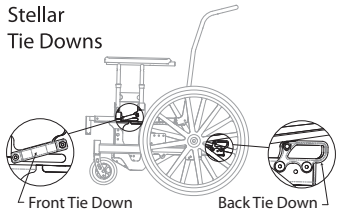


3 The rider must not weigh more than 250 lbs.

4 The wheelchair has been dynamically tested in a forward –facing mode for a 30 mph frontal impact test. The wheelchair must be forward facing during transport.

5 In order to reduce the potential of injury to vehicle occupants, wheelchair-mounted accessories, such as trays and respiratory equipment should be removed and secured separately.

Stellar
Tie Downs



6 Postural supports and positioning devices should not be relied on for occupant restraint.

7 Do not alter or substitute wheelchair frame parts, components or seating.

8 The figures below show the locations of the wheelchair securement points, front and back.

9 Use only with Wheelchair Tie Down and Occupant Restraint Systems (WTORS) that have been installed in accordance with the manufacturer's instructions and SAE J2249.

10 Attach WTORS to securement points in accordance with the manufacturer's instructions and SAE J2249.

11 Attach occupant restraints in accordance with the manufacturer's instructions and SAE J2249.

12 Sudden stops or impacts can structurally damage your chair. Chairs involved in such incidents should be replaced.

If you fail to heed these warnings, damage to your chair, a fall, tip-overs or loss of control may occur and cause severe injury to the rider or others.

Stability and Balance

To assure stability and proper operation of your wheelchair, you must at all times maintain proper balance. Your wheelchair has been designed to remain upright and stable during normal daily activities as long as you do not move beyond the center of gravity.

Virtually all activities which involve movement in the wheelchair have an effect on the center of gravity. PDG recommends using seat restraints for additional safety while involved in activities that shift your weight.

✖ **DO NOT** lean forward out of the wheelchair any further than the length of the armrests. Make sure the casters are pointing in the forward position whenever you lean forward. This can be achieved by advancing the wheelchair and then reversing it in a straight line.

Coping with Everyday Obstacles

Coping with the irritation of everyday obstacles can be alleviated somewhat by learning how to manage your wheelchair. Keep in mind your center of gravity to maintain stability/balance.

A Note to Wheelchair Assistants

When assistance to the wheelchair user is required, remember to use good body mechanics. Keep your back straight and bend your knees whenever tilting the wheelchair or traversing curbs, or other impediments.

Be aware of any removable (detachable) parts. These must NEVER be used for hand-held or lifting supports, as they may be inadvertently released, resulting in possible injury to the user and/or assistant(s).

When learning a new assistance technique, have an experienced assistant help before attempting it alone.

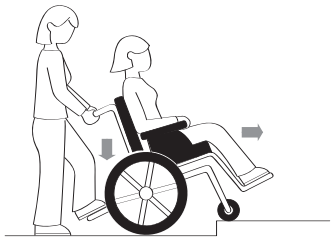
Tilting

✖ **WARNING: DO NOT** tilt the wheelchair without assistance.

When tilting the wheelchair, an assistant should grasp the back of the wheelchair on a non-removable(non-detachable) part. Inform the wheelchair occupant before tilting the wheelchair and remind him/her to lean back. Be sure the occupant's feet and hands are clear of all wheels.

Tilting – Curbs

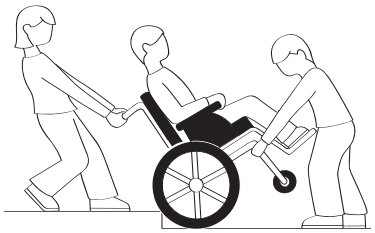
After mastering the techniques of tilting the wheelchair, use this procedure to tackle shallow curbs, short stairs, etc.



METHOD 1 - Wheelchair With Step Tubes

Apply a continuous downward motion until the balance point is achieved and the front casters clear the curb. At this point, the assistant will feel a difference in the weight distribution.

Roll the wheelchair forward and slowly lower the wheelchair in one continuous movement. Do not let the wheelchair drop the last few inches to the ground. This could result in injury to the occupant. Push the wheelchair forward until the rear wheels roll up and over the curb.



METHOD 2 - Wheelchairs without Step Tubes

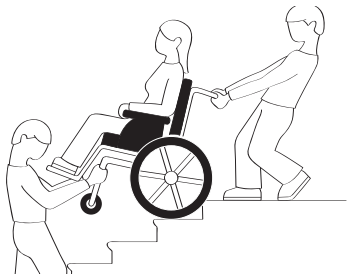
Unless the first assistant has exceptional upper body strength, it is recommended that METHOD 2 use two (2) assistants. The second assistant should be positioned at the front of the wheelchair lifting upward on a non-removable (non-detachable) part of the wheelchair frame when lifting the wheelchair and stabilizing the wheelchair when the wheelchair is being lowered to the ground.

The first assistant should stand on the sidewalk and turn the wheelchair so that the rear wheels are against the curb. The wheelchair should be tilted back to the balance point and, in one continuous downward movement, the rear wheels should be pulled up and over the curb. DO NOT return the front casters to the ground until the wheelchair has been pulled backward far enough for the front casters to clear the edge of the curb.

STAIRWAYS

WARNING — Do not attempt to lift a wheelchair by lifting on any removable (detachable) parts. Lifting by means of any removable(detachable) parts of a wheelchair may result in injury to the user or damage to the wheelchair.

Extreme caution is advised when it is necessary to move an occupied wheelchair up or down the stairs. PDG recommends using two(2) assistants and making thorough preparations. Make sure to use ONLY secure, non-detachable parts for hand-held supports.



Follow this procedure for moving the wheelchair between floors when an elevator is NOT available:

1 After the wheelchair has been tilted back to the balance point, one assistant (in the rear) backs the wheelchair up against the first step, while securely grasping a non-removable (non-detachable) part of the wheelchair for leverage.

2 The second assistant, with a firm hold on a non-detachable part of the framework, lifts the wheelchair up and over the stair and steadies the wheelchair as the first assistant places one (1) foot on the next stair and repeats STEP 1.

3 The wheelchair should not be lowered until the last stair has been negotiated and the wheelchair has been rolled away from the stairway.

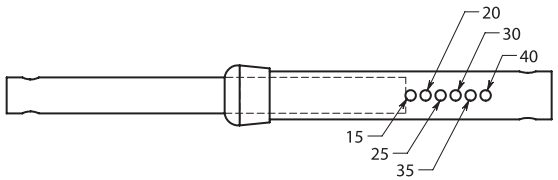
ESCALATORS

SORRY! **DO NOT** use an escalator to move a wheelchair between floors. Serious bodily injury may occur.

Adjusting the tilt limiter
Stellar and Stellar HD

The tilt limiter is a yellow telescoping tube that is set beside the gas strut. It has 6 holes to set the tilt stop.

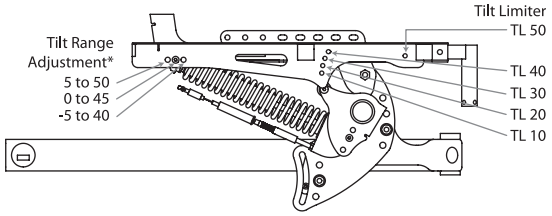
1. Insert the silver 10-32 Socket Cap Screw in the desired position. Refer to section below for tilt degree settings.



Adjusting the tilt range
Stellar GL Only

The Stellar GL has 3 different tilt ranges, all offering 45° of tilt. The 3 options are -5° to 40°, 0° to 45° and 5° to 50°. It is easily adjusted with one bolt at the end of the gas strut.

1 Three positions that the gas strut/ spring assembly can be set at at shown at right.



Adjusting the tilt limiter
Stellar GL only

The Stellar GL comes standard set at 0° to 45° and can be limited to 10º, 20°, 30° or 40° of tilt.

1. The tilt limiter is located underneath the seat pan on the upper frame. A white plastic bushing is held in place by a pull pin.

2 The image shows the four (4) different positions. A pull pin is inserted in the frame to select the desired tilt stop.

PROCEDURE 10: MOTOR VEHICLE USE

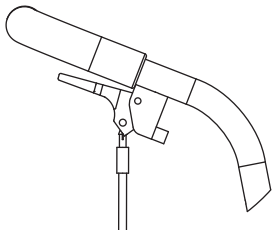
WARNING — Identify whether your chair has been manufactured with the Transit Tie-Down System (TTDS).

If your chair is NOT equipped with the Transit Tie-Down System (TTDS), this wheelchair DOES NOT meet federal standards for motor vehicle seating.

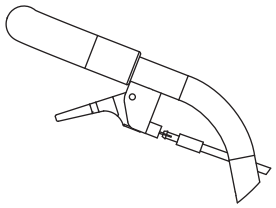
1 NEVER let anyone sit in this chair while in a moving vehicle.

2 ALWAYS secure the rider with proper vehicle restraints. In an accident or sudden stop the rider may be thrown from the chair. Wheelchair seatbelts will not prevent this and further injury may result from the belts or straps.

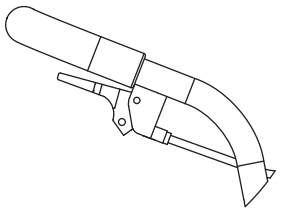
1 Fit metal cable-end into hole on trigger.

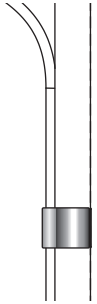


2 Feed cable through to the front of the trigger.

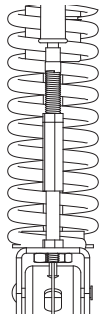


3 Push plastic parts together →← until they 'click' in place.





4 Clip cable onto back post using plastic clips provided.



5 Attach cable wire onto the strut, slide steel ball through slot on lever (so ball is underside of the lever).

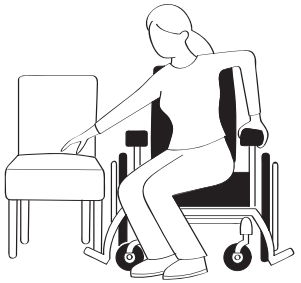
PROCEDURE 9: TILT LIMITER

This Procedure includes the following:

- Adjusting the Tilt Limiter (Stellar and Stellar HD)
- Adjusting the Tilt Range (Stellar GL)
- Adjusting the Tilt Limiter (Stellar GL)

WARNING — After making Adjustments, always make sure that parts are properly tightened BEFORE using the wheelchair.

TRANSFERRING TO AND FROM OTHER SEATS



WARNING — BEFORE attempting to transfer in or out of the wheelchair, every precaution should be taken to reduce gap distance. Turn both casters toward the object you are transferring onto. Also be certain the wheel locks are engaged to help prevent wheels from moving.

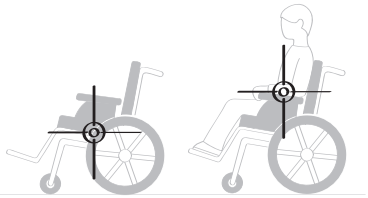
CAUTION — When transferring, position yourself as far back as possible in the seat. This will prevent damaged upholstery and the possibility of the wheelchair tipping forward.

NOTE — This activity may be performed independently provided you have adequate mobility and upper body strength.

1 Position the wheelchair as close as possible along side the seat to which you are transferring, with the front casters pointing toward it. Engage wheel locks. Shift body weight into seat with transfer.

2 During independent transfer, little or no seat platform will be beneath you. Use a transfer board if at all possible.

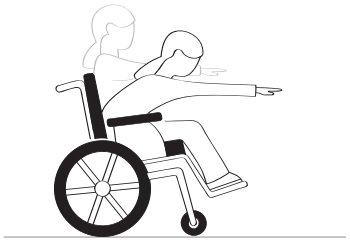
PERCENTAGE OF WEIGHT DISTRIBUTION



WARNING — DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees.

Many activities require the wheelchair owner to reach, bend and transfer in and out of the wheelchair. These movements will cause a change to the normal balance, the center of gravity, and the weight distribution of the wheelchair. To determine and establish your particular safety limits, practice bending, reaching and transferring activities in several combinations in the presence of a qualified health professional BEFORE attempting active use of the wheelchair.

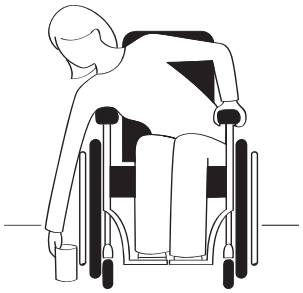
FUNCTIONAL REACH FROM A WHEELCHAIR



Proper positioning is essential for your safety. When reaching, leaning, bending forward, it is important to use the front casters as a tool to maintain stability and balance.

The approximate reach-limit values shown in the accompanying graph were derived on the basis of a sample of 91 male and 36 female subject wheelchair users. Note the difference between the maximum and the comfortable reach limits, a subjective but important consideration in design.

REACHING, LEANING and BENDING FORWARD



Bending Forward

Position the front casters so that they are extended as far as possible and engage wheel locks. DO NOT LEAN FORWARD OF THE ARMRESTS.

Bending Backward

WARNING —DO NOT lean over the top of the back upholstery. This will change your center of gravity and may cause you to tip over.

Position wheelchair as close as possible to the desired object. Point front casters forward to create the longest possible wheelbase. Reach back only as far as your arm will extend without changing your sitting position.

2 Carefully remove the nut and bolt from the upper end of the gas strut. Note that the spring is held in compression by a separate pin and will not extend when the bolt is removed.

3 When reassembling, be sure that strut location on the 'lower frame strut mount' coincides in height with the height connection on the front elevation bracket.

4 Re-assemble the gas strut ends to the desired attachment points under the Seat Pan.

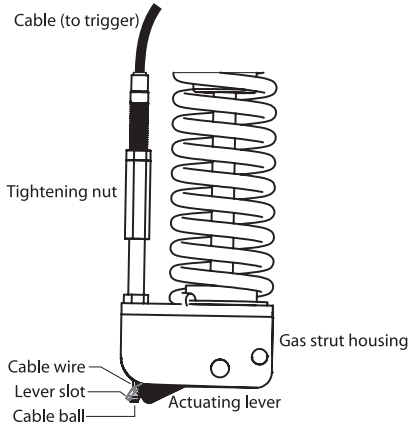
5 Reinstall locknuts and tighten securely.

PROCEDURE 8: ADJUSTABLE GAS STRUT AND CABLE ASSEMBLY

Adjusting Cable Tension

Once receiving and assembling the chair, you may find that the chair tilts with user in it when the trigger is not actuated or chair will not tilt when trigger is actuated. This problem may also occur over time as the cable wire 'stretches'.

A simple procedure is needed to adjust the tension of the cable wire:



IMPORTANT — Before adjusting - be sure the steel ball (at bottom end of cable wire) is inserted into actuating lever slot and cable is properly attached to trigger.

1 If the chair does not tilt when trigger is actuated - the cable wire is too loose and needs to be tightened. To do so, remove the rubber sleeve above the gas strut housing on the cable and turn the 'tightening nut' so less thread is showing above the nut.

2 If the chair tilts without actuation – the cable tension is too tight and needs loosening. Reverse the procedure from above, making more thread showing above the 'tightening nut'.

Removing and Installing the Gas Strut Actuator Cable

The procedure is outlined below for cable replacement.

1 Grab the cable just in front of the trigger. In one smooth motion, pull straight down until the cable releases from the end of the trigger. Pull the metal cable-end out from the side of the trigger.

2 Disconnect the opposite end of the cable from the strut, using a 7/16" and a 3/8" open end wrench.

3 To install the new cable, refit to the strut by reversing step 2. Be sure to connect the cable ball to the actuating lever.

4 Re-fit the metal cable end by inserting into the side of the trigger.

5 Feed the cable through to the front of the trigger

6 Hold the plastic parts in place and press the trigger, the cable should snap in place, if not you may need to push it until it snaps.

WHEEL / HEIGHT	12″	16″	20″	22″	24″
13″	A		A		
14″	B		B	A	
15″	C	A	C	B	A
16″	D	B	D	C	B
17″		C		D	C
18″		D			D

PROCEDURE 7: ADJUSTABLE SEAT TILT

This Procedure includes the following:

- Adjusting seat tilt
- Adjusting seat 'uplift' force
- Adjusting cable tension

WARNING — After making Adjustments, always make sure that parts are properly tightened BEFORE using the wheelchair.

Adjusting Seat Tilt

1 To adjust the tilt angle, activate the tilting lever located on side of push handle or on the armrest, depending on how the wheelchair has been configured. Allow seat back to lower to desired level and release tilt lever. Seat should 'lock' at desired tilt angle.

2 Note that the tilt lever may be mounted onto the left or right side of the backrest push bar or on the left or right armrest.

WARNING — When tilting chair, attendant must hold push handle securely so that seat does not drop too quickly.

Adjusting Seat 'Uplift' Force
Stellar Only

This procedure may be used to increase or decrease the 'uplift' force required to raise an occupant from a tilt position to a level seat position. Adjustment is made to both the upper and lower ends of the Gas Strut Assembly, positioning the end of the Gas Strut forward or rearward of its initial attachment point under the Seat Pan. There are many possible attachment points under the seat pan.

If the wheelchair occupant feels 'heavy' when attempting to restore the wheelchair to a seat level position, the gas strut attachment points should be moved rearward.

If the wheelchair occupant feels 'too light' or if the attendant has to use force to push the Seat Assembly in to tilt when activating the tilt mechanism, the gas strut attachment points should be moved forward.

IMPORTANT — Be sure the strut is extended to full length before adjusting.

1 Determine whether you wish to move the gas strut forward or rearward (see above). Determine if the desired adjustment is possible (you may have already set the chair at maximum or minimum 'lift'.

STANDARD FEATURES

1 Removable Armrest
2 Wheel Lock
3 Gas Strut Assembly (yellow spring)
4 Swing Away Front Rigging
5 Foot Plate
6 Front Caster
7 Tilt Activator (trigger)
8 Rear Wheel
9 Push Handle
10 Back Rest
11 Rear Axle Bolt
12 Lower Frame
13 Upper Seat Frame
14 Seat Cushion

UNPACKING

1 Check for any obvious damage to the carton or its contents. If damage is evident, notify your Dealer/ Carrier immediately.

2 Remove all loose packing from the carton.

3 Carefully remove all components from the carton.

NOTE — Unless the PDG Stellar is to be assembled immediately, retain cartons and packing materials for use in storing the wheelchair until assembly is required.

OUT OF THE BOX ASSEMBLY INSTRUCTIONS:

When unpacking a new Stellar, you will need to assemble the armrests, backrest, front rigging (if applicable), connect the cable from the strut to the tilt activator (trigger) and anti-tip tubes to complete the set-up .

Backrest

The seat frame has two bolts installed along the left and right side of the rear of the seat frame. Remove these bolts on each side and place the backrest subassembly into the back of the seat frame and replace bolts and fasten securely. To attach tilt actuator cable to the back post (trigger) follow instructions shown on page 21.

Front Rigging

Installing the front rigging depends on the type of front rigging included with chair – For plug-in front rigging, push in the button on the side of the upper tube and slide into the frame until the button aligns with the hole on the frame and snaps into place. For the "swing-away" style front rigging, mount the front rigging on top of the already mounted adaptor and lock into place.

Arm Assembly

Install the arm assembly's by simply sliding the arms into the slotted arm receivers on the frame.

Anti-Tip Tubes

If anti-tip tubes are not already installed on the chair, locate them in the box and slide them into the receivers at the back underside of the frame so that the rollers are pointing downwards. These will prevent the chair from overturning if the centre of gravity moves too far rearward and are **mandatory for safety and warranty protection.**

IMPORTANT — With the user sitting in the chair, check to ensure the wheelchair is stable in all tilted/untilted positions before dispensing the wheelchair.

INSPECTION

Examine exterior of the PDG Stellar for nicks, dents, scratches or other damages. Inspect all components. If damage is evident, notify your Dealer/Carrier immediately.

STORAGE

1 Store the repackaged PDG Stellar in a dry area.

2 DO NOT place other objects on top of the repackaged wheelchair.

SAFETY INSPECTION CHECKLIST

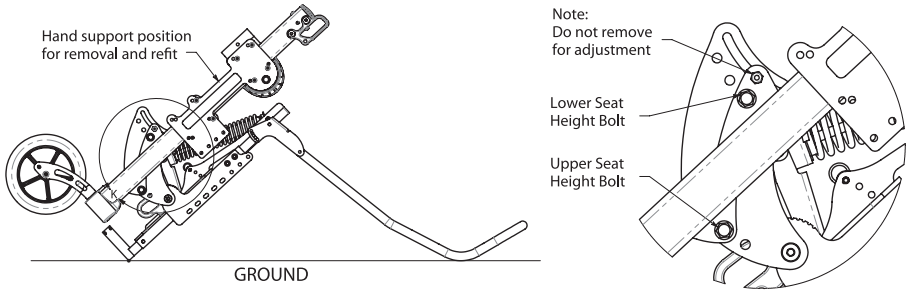
NOTE — Twice a year take your wheelchair to a qualified dealer for a thorough inspection and servicing. Regular cleaning will reveal loose or worn parts and enhance the smooth operation of your wheelchair. To operate properly and safely, your wheelchair must be cared for just like any other vehicle. Routine maintenance will extend the life and efficiency of your wheelchair.

Initial adjustments should be made to suit your personal body structure and preference. Thereafter follow these maintenance procedures:

6 Test the wheelchair to ensure the seat pan can be positioned approximately level when the gas strut is fully extended. Check to ensure all screws and nuts are assembled securely.

Adjusting Seat to Floor Height
Stellar GL

The seat to floor height on the Stellar can be adjusted from 13" to 18" depending on front caster and rear wheel combinations. The frame consists of 3 main components, the Upper Frame, Sub-Frame and Lower Frame.

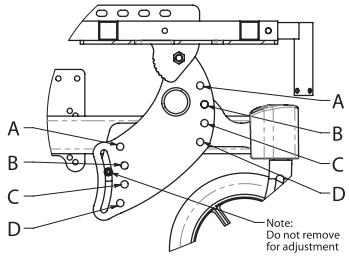


Recommended Chair Position

1 Remove the wheels, front rigging and arms from the chair. Tip it forward so that it is resting on the back post and front rigging receivers as shown above.

2 Remove the nuts and washers from the seat height adjustment bolts, they are two 3/8" hex bolts on each side of the frame, as shown.

3 Remove the four hex bolts while supporting the lower frame with your other hand.



4 Reposition the Sub Frame on the Lower Frame, there are four seat height options. Refer to chart on following page. Once the holes are lined up, insert lower seat height bolt on each side of the frame, this will help in the alignment of the frames. Then the upper seat height bolt can be refit.

5 Tighten all four bolts with nuts and washers.

6 Test the wheelchair to ensure the seat pan can be positioned approximately level when the gas strut is fully extended. Check to ensure all screws and nuts are assembled securely.

WHEEL / HEIGHT	12″	16″	20″	22″	24″
14″	SH-A		SH-A		
15″	SH-B		SH-B	SH-A	
16″	SH-C	SH-A	SH-C	SH-B	SH-A
17″		SH-B		SH-C	SH-B
18″		SH-B			SH-C

1 Remove the pivot bolts that attach the upper seat frame to the lower base frame, these are two socket head shoulder bolts located on the outside of the seat pan assembly (one screw on each side). These two screws attach the Seat Frame to the Base Frame and also act at the pivot point when the seat is tilted.

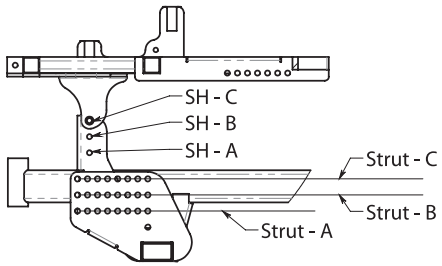
2 Reposition the Seat Frame to the desired elevation. There are three elevation choices without using frame height extenders. An additional 2″ may be achieved when frame height extenders are installed.

3 Remove the hex socket head screw bolt located on the Base Frame, which connects the lower end of the gas strut assembly to the Base Frame.

4 Reposition the lower end of the Gas Strut Assembly (Strut-A, B or C) to the elevation hole corresponding to the selected seat elevation (SH-A, B or C).

5 Install and tighten all appropriate nuts..

6 Test the wheelchair to ensure the seat pan can be positioned approximately level when the gas strut is fully extended. Check to ensure all screws and nuts are assembled securely.



Adjusting Seat-to-Floor Height (Stellar HD)

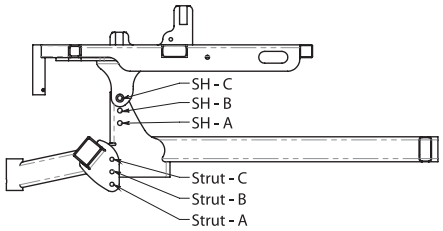
The seat-to-floor height on the Stellar HD can be adjusted from 16″ to 18″.

1 Remove the pivot bolts that attach the upper seat frame to the lower base frame, these are two socket head bolts located on the outside of the seat pan assembly (one screw on each side).

2 Reposition the Seat Frame to the desired elevation. There are three elevation choices.

3 Remove the socket head bolt located on the Base Frame, which connects the lower end of the gas strut assembly to the Base Frame.

4 Reposition the lower end of the Gas Strut Assembly (Strut-A, B or C) to correspond to the selected seat elevation (SH-A, B or C) as shown.



ITEM	INITIALLY	INSPECT/ ADJUST WEEKLY	INSPECT/ ADJUST MONTHLY	INSPECT/ ADJUST/ every 6 months
GENERAL				
Wheelchair rolls straight (no excessive drag or pull to one side).	✖			✖
Ensure all hardware is tight.	✖	✖		
WHEEL LOCKS (Procedure 6)				
Do not interfere with tires when rolling.	✖		✖	
Pivot points free of ware and looseness.	✖		✖	
Wheel locks easy to engage.	✖		✖	
CLOTHING GUARDS				
Inspect for bent or protruding metal.	✖			✖
Ensure all fasteners are secure.	✖			✖
SEAT/BACK UPHOLSTERY (Procedure 3)				
Inspect for rips or sagging.	✖			
Inspect fastening to ensure they are secure.	✖		✖	✖
REAR WHEELS (Procedure 4)				
No excessive side movement or binding when lifted and spun.	✖			✖
Quick-release axles lock properly.	✖	✖		✖
FRONT CASTER (Procedure 5)	✖	✖		✖
Inspect wheel/fork assembly for proper tension by spinning caster; caster should come to a gradual stop.	✖		✖	
Wheel bearings are clean and free of moisture.	✖	✖		
CAUTION: Wheels and tires should be checked periodically for cracks and wear, and should be replaced when necessary.	✖		✖	
TIRES (Procedures 5 and 6)				
Inspect for flat spots and wear.	✖		✖	
If pneumatic tires, check for proper installation.	✖	✖		
Inspect rear tires for cracks and wear.	✖			✖
CAUTION: Wheels and tires should be checked periodically for cracks and wear, and should be replaced when necessary.				
CLEANING				
Clean and wax all parts.				✖
Clean upholstery and armrests.				✖
Inspect axles are free from dirt, lint, etc.			✖	
Inspect tilt slides and roller bearings are free from dirt, lint, etc.			✖	

TROUBLESHOOTING

Problems	Solution
✖ Chair veers right ✖ Chair veers left ✖ Sluggish turn or performance ✖ Casters flutter ✖ 3 of 4 wheels contacting ground surface	If pneumatic, check tires for correct/equal pressure.
✖ Sluggish turn or performance ✖ Casters flutter ✖ Squeaks and rattles ✖ Looseness in chair	Check for loose stem nuts and bolts.
✖ Chair veers right ✖ Chair veers left ✖ Sluggish turn or performance ✖ Casters flutter	Check caster angle.
✖ Chair veers right ✖ Chair veers left ✖ Casters flutter	Check that both casters contact ground at the same time.

MAINTENANCE: FINE TUNING THE FIT

Adjustment Guide

The following instructions are intended to provide assistance in making wheelchair adjustments. It is important to note the initial wheelchair configuration prior to making changes. When making changes, dealers and users should do so under the guidance of a health care professional who is knowledgeable of the particular limitation of the wheelchair user. Be sure that when finished, all components are properly tightened and have been completed in accordance with these instructions. DO NOT over tighten hardware attaching to the frame. This could cause damage to the frame tubing.

Tools Required

Philips Screw Driver

Allen Keys: .....❒1/8″ ❒5/32″ ❒3/16″

Adjustable or Open End Wrench .....❒7/16″ ❒1-1/4″ ❒1-5/16″

Socket Head Driver with socket Heads .....❒9/16″ ❒3/4″ ❒1-1/4″

PROCEDURE 5: FRONT CASTERS

This Procedure Includes the Following:

- Installing/Players' Caster Forks
- Installing/Replacing Front Casters

WARNING — After making Adjustments, always make sure that parts are properly tightened BEFORE using the wheelchair.

Installing/Replacing Caster Forks Stellar and Stellar GL

1 Remove the cap on top of caster housing.

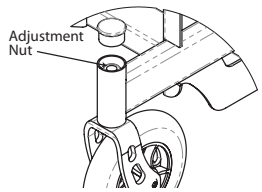
2 Loosen nut on caster stem using a ¾″ socket wrench.

3 Slide out caster fork assembly.

4 Reassemble by reversing steps 1-3 (Be sure bearings are replaced if removed).

5 Test the wheelchair for maneuverability.

Stellar and Stellar GL



Installing/Replacing Front Casters Stellar HD

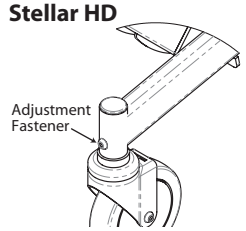
1 Remove bolt from front of caster housing.

2 Slide out caster.

3 Reassemble by reversing steps 1-2.

4 Test the wheelchair for maneuverability.

Stellar HD



PROCEDURE 6: SEAT-TO-FLOOR HEIGHT

This Procedure includes the following:

- Adjusting Seat to Floor Height.

WARNING — After making Adjustments, always make sure that parts are properly replaced and tightened BEFORE using the wheelchair.

Adjusting Seat to Floor Height Stellar

The seat to floor height on the Stellar can be adjusted from 14″ to 18″ depending on front caster and rear wheel combinations.

An additional 2″ height can be obtained by using an elevation extender kit.

Refer to the Stellar spec sheet for different seat height/front caster/rear wheel combinations.

WARNING

Make sure the detent pin and locking pins of the quick-release axle are fully released BEFORE operating the wheelchair. The locking pins MUST be protruding past the outside of the rear wheel axle receiver for a positive lock. Keep locking pins clean.

Adjusting the Rear Axle position

The rear wheel position may be adjusted forward or rearward.

1 There are six bolts on each of the axle plates which hold the axle plates tight onto the lower frame. To change the position of the rear wheels, loosen these bolts slightly, and slide the rear axles forward or rearward as desired. Before re-tightening, be sure both rear axles are in the same location as measured from the rear of the lower frame members. There are measuring indicators on the bottom of the lower frame members.

2 The antitip tubes slide into receivers at the back of the frame so that the rollers prevent the chair from overturning if the centre of gravity moves too far rearward.

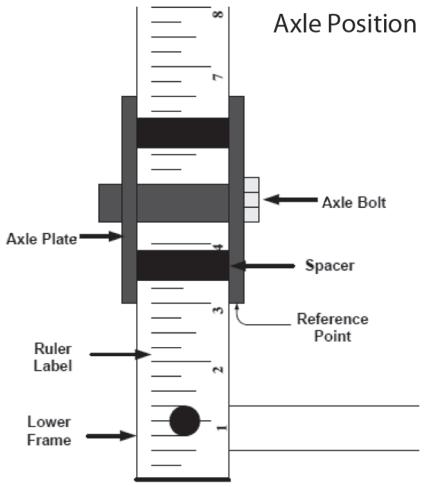
IMPORTANT — With the user sitting in the chair, check to ensure the wheelchair is stable in all tilted/untilted positions before dispensing the wheelchair.

Setup of 16" / 22" / 24" Rear Wheel Anti-tippers

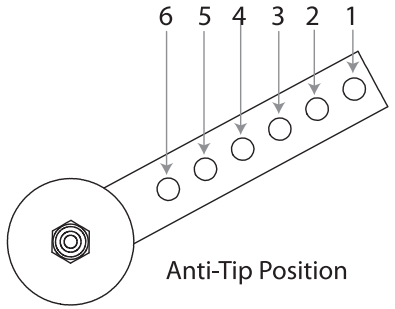
Axle positions are noted by the location of the rear edge of the axle plate on the ruled sticker on the frame.

The hole position on the anti-tip tube is shown.

Stellar



Axle Position	Anti-Tip Wheel Position
3½" – 4½"	4
4¾" – 6¾"	5
7" – 8"	6



The extra positions on the anti-tipper (1 through 3) can be used to make the chair more stable, but it will reduce the caster clearance when tipped backwards.

Cleaning

Periodic cleaning of all surfaces will help keep your wheelchair looking good and operating properly. All surfaces can be cleaned using warm water and a mild soap solution. Do not use abrasive cleaners on any surfaces.

SUGGESTED MAINTENANCE PROCEDURES

1 Before using your PDG Stellar, make sure all nuts and bolts are tight. Check all parts for damage or wear and replace. Check all parts for proper adjustment.

2. Keep quick-release axles, if applicable, free of dirt and lint to ensure positive locking and proper operation. Refer to ADJUSTING THE QUICK-RELEASE AXLE or in PROCEDURE 4 of this manual.

3 If applicable, oil quick-release axles at least once (1) a month (3-in-1 oil or equivalent).

WARNING — If pneumatic tires are used, do not use the wheelchair unless it has the proper tire pressure (p.s.i.). DO NOT over inflate the tires. Failure to follow these suggestions may cause the tire to explode and cause bodily harm.

4 If tires are pneumatic, recommended tire pressure is listed on the side wall of the tire.

5. The wheels and tires should be checked periodically for cracks and wear, and should be replaced when necessary at your authorized dealer or by a qualified technician.

6 For wheelchairs with handrims, periodically check handrims to ensure they are secured to the rear wheels.

PROCEDURE 1: FRONT RIGGING

This Procedure includes the following:

- Footrest Assembly Installation
- Footrest Height Adjustment

WARNING — After making adjustments, always make sure that parts are properly tightened BEFORE using the wheelchair.

Plug-In Footrest Assembly Installation
Stellar and Stellar GL only

1 To mount plug-in style front rigging, push the "button" located near the top of the footrest tube and slide into open square tube (seat rail) at front of chair. Footrest hanger will lock into position when the button 'pops' through hole near the front of the seat rail.

2 To release front rigging, push button (front of seat rail) and slide front rigging forward and out of the open square seat rail tube.

Swing-Away Footrest Assembly Installation

1 To mount swing-away style front rigging, slide front rigging on already existing "swing-away adaptors". The front rigging should 'click' and lock into place.

2 To release and swing away, push button on front rigging and push front rigging aside.

Footrest Height Adjustment

Height adjustment is made to the desired length with individual sitting in wheelchair with feet on foot plates. The lowest point of the foot plates should be no less than 2" from the ground or floor.

1. Remove the nut, bolt and coved washers and position the footrest assembly to a determined height.
2 Line up mounting hole and the aluminum insert in the footrest tube, reinsert the bolt and securely tighten by hand. Be sure to replace coved washers as well.
3 Repeat the procedure for the other footrest.

NOTE — Check to ensure that desired front rigging adjustment does not cause pressure to legs at front of seat upholstery. Such a condition could cause injury to the occupant.

WARNING

DO NOT ATTEMPT TO STAND ON FOOT PLATES. Standing on the foot plates will cause the chair to tip forward abruptly and may result in an injurious fall to the individual.

DO NOT ATTEMPT to lift chair by the footrests or leg rests. These components are designed to separate from the wheelchair.

FRONT RIGGING SHOULD BE REMOVED when entering or exiting from the wheelchair.

PROCEDURE 2: ARMRESTS

This Procedure includes the following:

- Adjusting Armrest Height
- Removing Armrests
- Armrest Pads

Adjusting Armrest Height (Dual Post Arms)

1 Unlock the arm by depressing the black release button on the upper front of the armrest while moving the armrest up or down. Adjust Armrest to desired height. The armrest height will 'lock' when the release button pops out of one of the armrest height adjustment holes.

Removing Armrests (Dual Post Arms)

1 Release the arm assembly by depressing the black release lever on the front of the armrest (just above the seat pan) while pulling the armrest up.

Adjusting Armrest Height (Single Post Arms)

1 Unlock the arm by depressing the black plastic release button on the side of the arm while moving the armrest up or down. Adjust Armrest to desired height. The armrest height will 'lock' when the release button pops out of the side of the arm.

Removing Armrests (Single Post Arms)

1 Release the arm assembly by lifting up on the black release lever of the arm receiver (mounted to the seat frame) while pulling the armrest up.

Armrest Pads

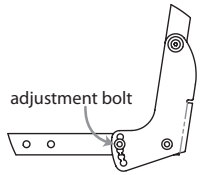
1 Check for rips or breaks. If these are present, replace immediately to maintain appearance and comfort. Armrest pad should sit flush against frame. If the pad is cracked or retaining screws are stripped, replace pad immediately.

PROCEDURE 3: SEAT AND BACK

This Procedure includes the following:

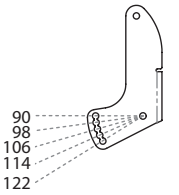
- Adjusting the Back Angle
- Adjusting the Seat Depth

WARNING — After making adjustments, always make sure that parts are properly tightened BEFORE using the wheelchair.



Adjusting the Back Angle

The seat-to-back angle may be set at a range of 90°–122°. Only 2 bolts need to be removed in order to change the angle.



1. To set the seat-to-back angle at 90°-122°, first loosen and remove the angle adjustment bolt shown. Note: there are two bolts; one on each side of the chair.
2. Adjust the bracket to the desired angle and re-install the bolts.
3. Retighten the nuts.

NOTE — The locknuts should be re-used no more than five (5) times to ensure locking material grips. If locknuts are worn, please replace.

PROCEDURE 4: REAR WHEELS

This Procedure includes the following:

- Removing/Installing the Rear Wheels
- Adjusting the Axle Location / Wheel Position Adjustment

Removing/Installing the Rear Wheels/Axles

1 Unless the product was ordered with quick-release axles, the rear wheels can be removed using a ¾" socket head and a ¾" crescent wrench. If the chair is configured using axle bolts (not quick-release), the axle bolt heads must be located on the inside of the frame with the nuts located on the outside of the rear wheel hubs. If axle bolts are installed backwards, the seat frame may hit the end of the axle bolts when attempting to tilt the chair. During assembly, tighten the axle bolts so that the rear wheels are snug but not so much that the wheels are unable to spin freely.

If quick-release axles have been supplied, push in the tip of the quick-release axle and pull the wheel off of the axle.

2 To reinstall the rear wheel onto the wheelchair, reverse step 1.